RECEIVED
CENTRAL FAX CENTER

JUN 19 2006

OGILVY RENAULT
LLP / S.E.N.C.R.L., s.r.l.

Facsimile

Our File: 9-13528-104US

Number of pages including cover letter:	34
Date:	June 19, 2006
From:	**Sandra Touchette for Kent Daniels**
Telephone:	(613) 780-8624
E-mail:	stouchette@ogilvyrenault.com

To	Company	City	Fax
ART UNIT 2134 Examiner: Thomas M. HO	United States Patent Office – Facsimile Centre	Alexandria, VA	(571) 273-8300

Re: Serial No. 09/597,974
Inventors: Kim B. Roberts et al.
Title: VALIDATION OF A CONNECTION BETWEEN ARBITRARY END-NODES IN A COMMUNICATIONS NETWORK

APPEAL BRIEF attached.

Barristers and Solicitors
Patent and Trade-Mark Agents

45 O'Connor Street
Suite 1700
Ottawa, Ontario
Canada K1P 1A4

Telephone (613) 230-6072
Fax (613) 230-6706

ogilvyrenault.com

Continuing the practices of
Meighen Demers
Ogilvy Renault
Swabey Ogilvy Renault

RECEIVED
CENTRAL FAX CENTER
JUN 19 2006

PTO/SB/21 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	33

Application Number	09/597,974
Filing Date	06/20/2000
First Named Inventor	Kim B. Roberts
Art Unit	2134
Examiner Name	Thomas M. Ho
Attorney Docket Number	9-13528-104US

ENCLOSURES (Check all that apply)

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation
- ☐ Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☑ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please identify below):

Cover Letter; Previously filed Transmittal and Fee Transmittal Forms; Auto-Reply Facsimile Transmission, Deposit Account Statement

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Ogilvy Renault LLP		
Signature	K. Daniels		
Printed name	Kent Daniels		
Date	June 19, 2006	Reg. No.	44,206

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	K. Daniels		
Typed or printed name	Kent Daniels	Date	June 19, 2006

OGILVY
RENAULT

June 19, 2006

MAIL STOP APPEAL BRIEF -PATENTS

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
U.S.A.

Sir:

RE:	**U.S. Patent Application Serial No. 09/597,974**	
	Title:	**Validation of a Connection Between Arbitrary End-Nodes in a Communications Network**
	Inventors:	**Kim Roberts et al.**
	Assignee:	**Nortel Networks Limited**
	Our File:	**9-13528-104US**

In connection with the above-identified patent application, an Appeal Brief was filed at the US Patent Office via facsimile on August 12, 2005. A review of the file wrapper on the US Patent Office website does not acknowledge that an Appeal Brief was ever received at the US Patent Office and matched to the file.

Therefore, the Appeal Brief as originally filed on August 12, 2005 is attached, together with evidence that it indeed was received by the US Patent Office.

Firstly, we attach the US Patent Office's Auto-Reply Facsimile Transmission confirming that 28 pages were received on August 12, 2005 in connection with this application. Please be advised that the serial number as shown on the fax cover page is incorrect. However, the Transmittal Form, Fee Transmittal Form and Appeal Brief all clearly state the correct serial number.

Secondly, we enclose the August 2005 Deposit Account Statement which identifies that the $500.00 US Appeal Brief filing fee was withdrawn from our Deposit Account on August 15, 2005 against this application.

We therefore respectfully request that the Appeal Brief attached hereto be entered against this application and considered by the Examiner. However, please ensure that the fee is **not** withdrawn a second time.

Barristers & Solicitors
Patent & Trade-mark Agents

1981 McGill College Avenue
Suite 1600
Montréal, Quebec
Canada H3A 2Y3

Telephone (514) 845-7126
Fax (514) 288-8389

ogilvyrenault.com

Continuing the practices of
Meighen Demers
Ogilvy Renault
Swabey Ogilvy Renault

OGILVY
RENAULT
LLP / S.E.N.C.R.L., s.r.l.

We would appreciate receiving acknowledgement that the Appeal Brief has been received and will be processed and reviewed.

Please send all correspondence to Kent Daniels at Ogilvy Renault LLP, 1981 McGill College Ave., Suite 1600, Montreal, Quebec, Canada H3A 2Y3.

Respectfully submitted,

K. Daniels

Kent Daniels
Reg. No. 44,206
Agent of Record

KD/st
Encls.

RECEIVED
CENTRAL FAX CENTER
JUN 19 2006

COPY

PTO/SB/21 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	27

Application Number	09/597,974
Filing Date	06/20/2000
First Named Inventor	Kim B. Roberts
Art Unit	2134
Examiner Name	Thomas M. Ho
Attorney Docket Number	9-13528-104US

ENCLOSURES (Check all that apply)

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [x] Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please identify below):

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Ogilvy Renault LLP		
Signature	K. Daniels		
Printed name	Kent Daniels		
Date	August 12, 2005	Reg. No.	44,206

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	K. Daniels		
Typed or printed name	Kent Daniels 44,206	Date	August 12, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

RECEIVED
CENTRAL FAX CENTER
JUN 19 2006

COPY

PTO/SB/17 (12-04v2)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500

Complete If Known	
Application Number	09/597,974
Filing Date	June 20, 2000
First Named Inventor	Kim B. Roberts
Examiner Name	Thomas M. Ho
Art Unit	2134
Attorney Docket No.	9-13528-104US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 19-5113 Deposit Account Name: Ogilvy Renault

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 or HP =	_____ x	_____ =	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	_____ x	_____ =	_____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round up to a whole number)	x _____	= _____

4. OTHER FEE(S)

Non-English Specification, $130 fee (no small entity discount)

Other (e.g., late filing surcharge): (1402) Appeal Brief Fee $500

Fees Paid ($): 500

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	Telephone (613) 780-8673
Name (Print/Type)	Kent Daniels 44,206		Date August 12, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

COPY

PTO/SB/17 (12-04v2)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500

Complete if Known	
Application Number	09/597,974
Filing Date	June 20, 2000
First Named Inventor	Kim B. Roberts
Examiner Name	Thomas M. Ho
Art Unit	2134
Attorney Docket No.	9-13528-104US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 19-5113 Deposit Account Name: Ogilvy Renault

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 or HP =	_____	x _____	= _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	_____	x _____	= _____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____	/ 50 = _____ (round up to a whole number)	x _____	= _____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge): (1402) Appeal Brief Fee $500	500

SUBMITTED BY			
Signature	K. Daniels	Registration No. (Attorney/Agent)	Telephone (613) 780-8673
Name (Print/Type)	Kent Daniels 44,206		Date August 12, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

RECEIVED
CENTRAL FAX CENTER
JUN 19 2006

COPY

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :
Kim B. Roberts et al.

Serial No: 09/597,974

Filed: June 20, 2000

For: Validation of a Connection Between Arbitrary End-Nodes in a Communications Network

Attorney Docket No.
9-13528-104US

Group Art Unit: 2134

Examiner: HO, Thomas M

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA
22313-1450 U.S.A.

MAIL STOP APPEAL BRIEF -PATENTS

Sir:

APPELLANT'S BRIEF UNDER 37 C.F.R. § 1.192

Pursuant to 37 C.F.R. § 1.191, the Applicant submitted a Notice of Appeal from the Examiner to the Board of Patent Appeals and Interferences on June 14, 2005. Specifically, the Applicant takes appeal from the Examiner's rejection of claims 1-59 under 35 U.S.C. § 103(a). The Notice of Appeal was filed in response to the Examiner's Final Action (paper No. 4) mailed February 20, 2005 and Advisory Action mailed May 6, 2005. Pursuant to 37 C.F.R. § 1.192, the Applicant now submits the following brief.

1) Real Party in Interest

The real party of interest is Nortel Networks Limited, by virtue of an assignment executed by the inventors in favour of Nortel Networks Limited recorded at Reel/Frame 010907/0014.

2) **Related Appeals and Interferences**

None.

3) **Status of claims**

Pursuant to the Final Action (paper No. 4) mailed February 20, 2005, the status of the claims is as follows:

(a) claims 1-59 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of Tektronix, Inc. "SONET Telecommunications", 1997.

4) **Status of Amendments**

No claim amendments were submitted in the Applicant's response filed April 11, 2005, to the Final Office Action (paper No. 4) mailed February 20, 2005. Accordingly, the claims remain as amended in the Applicant's response filed on May 11, 2004. A copy of the current claims is provided in the Appendix below.

5) **Summary of Invention**

The present invention is generally directed to methods and systems for validating connections mapped through a SONET/SDH communications network between first and second end-nodes via at least one intermediate node. Connection validation is accomplished by inserting performance monitor (PM) information into predetermined location within a data signal at the first end-node. In some embodiments, the PM information is inserted into an unused portion of the transport overhead (TOH) of a SONET/SDH data signal. At each intermediate node between the first and second end-nodes, the PM information is extracted from the data signal, buffered while the data signal is pointer processed, and then reinserted before forwarding the data signal. At the second end-node, the PM information is extracted and examined.

Thus the present invention provides a technique for validating a connection independently of SONET/SDH Section, Line and Path validation techniques. In particular, the three-step processing of the performance monitoring information performed at each

intermediate node (i.e. extraction, buffering, and re-insertion) implements a "pass-through" function, in which the PM information of the connection passes through the intermediate node, and therefore avoids being terminated by standard Section, Line and Path termination processes. Consequently, the present invention enables validation of connections that are independent of any standard Section, Line or Path connections mapped through the SONET/SDH network.

6) Issues

The following issues presented for review by the Board of Patent Appeals and Interferences are as follows:

(a) Whether the Examiner has properly established *prima facie* obviousness of claims 1-59 based on the teaching of Tektronix, Inc. "SONET Telecommunications", 1997.

7) Grouping of Claims

Claims 1-59 are pending in the present application. Of these, claims 1 and 35 are independent claims. The issues presented for review can be decided with reference to claim 1.

Applicant submits that the claims do not stand or fall together. In particular, at least claims 6, 11, 15, 28, 29, 33, 36, 40, 45, 46, 48, and their dependencies, define further patentable subject matter. Accordingly, in the event that the Examiner's rejection of claims 1 or 35 is affirmed, at least claims 6, 11, 15, 28, 29, 33, 36, 40, 45, 46, 48 and their dependencies, will not automatically fall.

8) Argument

In order to facilitate review by the Board, the Applicant's arguments are presented in the following order:

- The Examiner's rejection of claims 1-59 under 35 U.S.C. § 103(a)
- Brief description of the cited reference
- Has the Examiner established *prima facie* obviousness in respect of claims 1-59

Arguments pertaining to each of these points are presented below under equivalent sub-headings.

(i) The Examiner's rejection of claims 1-59 under 35 U.S.C. § 103(a)

In the Final Office Action (Paper No. 4) mailed February 20, 2005, the Examiner asserted, with reference to claim 1, that:

> Tektronix Inc. "SONET Telecommunications" discloses ...
>
> a) at the first end node, inserting performance monitor (PM) information into a predetermined location ...
>
> - where the performance monitor information has a predetermined location in the Section Overhead of the header . Techtronix "SONET Telecommunications" page 7, "Section Overhead"
>
> b) "at the at least one intermediate node, where the intermediate node is the regenerator node.
>
> iii) reinserting the buffered PM information into the predetermined location within the signal prior to transmitting the data signal toward the second end node, b, where "Regenerator" p19 discloses that the regenerator replaces the Section overhead, which contains the PM information page 7, "Section Overhead", thereby reinserting the data by rewriting it to the new signal to be transmitted."

The Examiner asserts that "Tektronix fails to explicitly state

> i) extracting the PM information from the predetermined location within the signal received at the intermediate node
>
> ii) buffering the extracted PM information"

However, the Examiner argues that "In order for the PM information to actually be of use, at some point in the communication, it would have to be necessary to extract it an analyse it for inconsistencies and errors. Once this data is extracted, it would have to be stored somewhere for comparison and analysis, thereby "buffering" the extracted PM information.". Based on this reasoning, the Examiner concludes that "while it is not explicitly disclosed that extraction and buffering of the PM information in the section overhead between the PTE node and REG node is performed, it would have been obvious to one of ordinary skill in the art at the time of invention to analyze (extracting and buffering) the performance monitoring data of the section overhead to make sure the signal had no errors in the transmission of the SONET signal between the PTE node and the REG node, before rewriting it."

It should be noted that, because the Examiner has focused on the performance monitoring (PM) information contained in the Section Overhead, the comments and arguments presented below in rebuttal of the Examiner's rejections will also concentrate on the PM information contained in the Section Overhead. It will be appreciated, however, that the same line of argument would also apply to PM information contained in Line Overhead, which is also described in the Tektronix reference.

(ii) Brief description of the cited reference

Tektronix, Inc. "SONET Telecommunications", 1997 "provides an introduction to the Synchronous Optical Network (SONET) standard". Pages 1 and 2 provide basic background information on the SONET. Pages 4-6 describe the format of the Synchronous Transport Signal (STS) frame. More particularly, with reference to page 4 of the Tektronics reference. The STS-1 frame structure is clearly illustrated in figures 1 and 2. Referring to paragraph 2 under the heading: **STS Frame Structure:**

> As shown in figure 1, the first three columns of the STS-1 frame are for transport overhead. The three columns each contain nine bytes. Of these, nine bytes are for overhead for the Section Layer ... and 18 bytes of overhead for the Line Layer. The remaining 87 columns constitute the STS-1 Envelope Capacity.

In the SONET standard, data being transported by the STS-1 frame is mapped into the STS-1 Envelope Capacity using a Synchronous Payload Envelope (SPE). Various mapping schemes are discussed in the Tektronix reference starting at pages 12-17. As stated at the upper right of the page (under heading : **STS-1 Envelope Capacity and Synchronous Payload Envelope (SPE)**):

> Figure 3 depicts the STS-1 SPE, which occupies the STS-1 Envelope Capacity. The STS-1 SPE consists of 783 bytes, and can be depicted as an 87 column by 9 row structure. Column 1 contains ... Path Overhead (POH). Two columns... are designated as 'fixed Stuff' columns. The ...remaining 84 columns are designated as the STS-1 Payload Capacity.

As stated on page 5 of the Tektronics reference (under heading : **STS-1 SPE in Interior of STS-1 Frames**): "The STS-1 SPE may begin anywhere in the STS-1 Envelope Capacity (See figure 4)."

Based on the foregoing, it will be readily apparent that the STS-1 frame is a 90 column by 9 row structure, made up of three columns of transport overhead and 87 columns of Envelope Capacity. In the SONET standard, the SONET payload is mapped into the (87 column wide) Envelope Capacity using an SPE, but the starting point of the SPE within the envelope capacity is undefined – that is, the SPE can "float" within the STS-1 frame Envelope Capacity.

Pages 7-10 describe SONET overheads in the context of the basic Section, Line and Path connection layers of the SONET. Representative Section, Line and Path connections are illustrated, by way of a simplified example, in Figure 6, and the locations of corresponding Section, Line and Path overheads within the STS frame are illustrated in FIG. 7.

As stated on page 7, at column 2, first full sentence (under heading: Overheads), the Tektronix reference states that: "Section overhead is used for communications between adjacent network elements, such as regenerators." And, on that same page, (under heading : **Section Overhead**): "Section Overhead contains nine bytes of the transport overhead accessed,

generated, and processed by section-terminating equipment". Reference to FIG. 6 shows that such" section-terminating equipment " can include Path Terminating Equipment (PTE), regenerators (REG) and Line Terminations (ADM or DCS). Reference to the Glossary (starting on page 27) is also instructive. At page 31, the flowing relevant definitions are found:

> **Section** – The span between two SONET network elements capable of accessing, generating, and processing only SONET Section overhead. This is the lowest layer of the SONET protocol stack with overhead.
>
> **Section Overhead** – Nine bytes of overhead accessed, generated and processed by section terminating equipment. This overhead supports functions such as framing the signal and performance monitoring.
>
> **Section Terminating Equipment** – Equipment that terminates the SONET Section layer. STE interprets and modifies or creates the Section Overhead.

Thus, the regenerator of Tektronix FIGs. 6, and 21 is explicitly described as an example of section terminating equipment (STE), which terminates the Section layer connection, and which "interprets and modifies or creates" the section overhead.

Table 3 on page 8 sets out the contents of the Section overhead. With reference to table 3, it is seen that bytes A1 and A2 are framing bytes, used to indicate the beginning of the frame, while the bytes E1, F1 and D1-D3 provide messaging channels for set-up and provisioning (E1); user's purposes (F1); and Operations, Management and Administration (D1-D3). This leaves the B1 and J0 bytes as the sole performance monitoring (PM) information bytes of the section overhead. Since only the J0 and B1 bytes of the Section Overhead are involved in performance monitoring, and are used to convey performance monitoring information, the remaining discussion will focus on these bytes within the Section Overhead.

As is well known in the art, Section Trace (J0) is used as a messaging channel between two adjacent nodes for verifying connectivity across their respective section. Thus, in the example of figure 6, the PTE node and the immediately adjacent regenerator terminate a

Section, and will verify connectivity across that section by exchanging section trace messages via the J0 byte. Similarly, the regenerator and the line termination (ADM or DCS) will verify connectivity through their section by exchanging section trace messages via the J0 byte. This implies that the regenerator will extract and analyse the content of the J0 byte from frames received from the PTE, and vice-versa. At the same time, the ADM will extract and analyse the content of the J0 byte from frames received from the regenerator; and vice-versa.

Table 3 defines the B1 byte as a "Section bit interleaved parity code (BIP-8) byte – This is a parity code (even parity) used to check for transmission errors over a regenerator section. Its value is calculated over all bits of the previous STS-N frame after scrambling, then placed in the B1 byte of the STS-1 before scrambling." As stated in the Glossary (see page 30, Parity Check) "even parity" means that the parity code is calculated such that the total number of 1's in the STS frame is an even number. As such, "processing the B1 byte" of a received signal (e.g. at the Regenerator) is easily accomplished by merely counting the number of 1's in the received STS frame, and determining whether this is an even number. Obviously, no extraction or analysis of the B1 byte itself is required to do this.

(iii) Has the Examiner established *prima facie* obviousness of claims 1-59

Applicant respectfully submits that the Examiner has not established *prima facie* obviousness of at least claims 1 and 35, and, by extension, claims 2-34 and 36-59. MPEP. § 703.02(j) sets out three criteria that must be met by the Examiner in order to establish a *prima facie* case of obviousness.

> "First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings."
>
> "Second, there must be a reasonable expectation of success."
>
> "Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

It is submitted that that the Examiner has not met these criteria, and thus has not established *prima facie* obviousness of claims 1 and 35 (and, by extension, dependent claims 2-34 and 36-59).

With reference to the first criterion, Applicant submits that there is no suggestion or motivation, in the Tectronix reference, to modify the SONET standard in any manner whatsoever, let alone in the manner suggested by the Examiner.

In particular, the Techtronix reference is merely a primer on the SONET standard. It teaches nothing that is not part of the SONET standard, and in particular does not teach or suggest ways in which the SONET standard might be modified. Rather, the Techtronix reference describes standard SONET technology, including the format and use of the various types of SONET overhead. Nothing more. As such, the Examiner's modification of the SONET standard to include extraction, buffering and reinsertion of PM information (i.e. the J0 and B1 bytes) contained in the section overhead, is clearly the Examiner's own invention. Such operation is contrary to the SONET standard, and the Techtronix reference -- being "an introduction to the technology of SONET" neither suggests such modifications nor provides motivation for doing so.

With reference to the Second criterion, Applicant submits that there is no reasonable expectation that the Examiner's modification would be successful, because such modification is already inoperative.

For example, consider the B1 byte of section overhead (Table 3, page 8). The Examiner asserts that it would be obvious to modify the SONET standard, such that the parity code is extracted from a received frame; buffered; and then reinserted into an outgoing frame transmitted through the next section. Such an operation is manifestly inoperative, because any parity errors in the received frame would be propagated to the outgoing frame. For example, consider a signal received by the regenerator (FIG. 6) from the PTE. If the regenerator detects a parity error in the received frame (that is, the received frame contains an odd number of 1's), then inserting the received parity code into an outgoing frame being sent to the ADM dramatically increases the probability that the ADM will also detect a parity error, even if the

section is working perfectly. Furthermore, if the ADM does detect a parity error, it cannot determine whether the detected parity error arose from transmission errors between the PTE and the regenerator, or between the regenerator and the ADM. This clearly precludes successful checking for transmission errors over a section, which is the whole intent of the B1 parity byte of the section overhead.

A similar situation exists in respect of section trace (byte J0). The Examiner asserts that it would be obvious to modify the SONET standard so that the section trace message is extracted from a received frame; buffered; and then reinserted into an outgoing frame being transmitted through the next section. Such an operation is clearly inoperative, because any section trace errors in the received signal would be propagated to the outgoing frame. For example, consider a signal received by the regenerator (FIG. 6) from the PTE. If the regenerator detects a section trace error in the signal (e.g. a mismatch between the received trace message and an expected message), then inserting the received trace message into an outgoing frame being sent to the ADM dramatically increases the probability that the ADM will also detect a section trace error, even if that section is working perfectly and the ADM is expecting the same trace message (which may or may not be true). Furthermore, if the ADM does detect a section trace error, it cannot determine whether the detected error arose from transmission errors between the PTE and the regenerator, or between the regenerator and the ADM. This clearly precludes successful validation of connectivity over a section, which is the whole intent of the J0 section trace byte of the section overhead.

In light of the foregoing, it is submitted that the Examiner's modification of the SONET standard to extract, buffer, and then reinsert PM information of the section overhead is inoperative, and thus offers no possibility of success.

With reference to the Third criterion, Applicant submits that the Tektronix reference does not teach or suggest all the claim limitations. At a minimum, the Tektronix reference does not teach or suggest the claimed limitation of: "reinserting the buffered PM information into the predetermined location within the signal prior to transmitting the data signal toward the second end-node."

As noted above, to the extent that PM information is extracted and buffered at all, reinserting such buffered information is inoperative. As such, the Examiner's assertion that the Tektronix reference teaches such an inoperative function must necessarily be a mis-representation of the teaching of the Tektronix reference. In fact, such mis-representation by the Examiner is plainly seen upon a reading of the Tektronix reference itself. In particular, at page 19, "Regenerator", the Tektronix reference states that "the regenerator ... replaces the section overhead", while the "Line overhead, payload, and path overhead are not altered". Thus the Tektronix reference explicitly draws a distinction between overhead that is passed through a node (i.e. buffered and reinserted) and overhead that is replaced, clearly indicating that these are not equivalent functions.

Merriam-Webster Online (http://www.m-w.com) provides the following definitions for the word "replace":

> **1** : to restore to a former place or position <*replace* cards in a file>
>
> **2** : to take the place of especially as a substitute or successor
>
> **3** : to put something new in the place of <*replace* a worn carpet>
>
> **synonyms** REPLACE, DISPLACE, SUPPLANT, SUPERSEDE mean to put out of a usual or proper place or into the place of another. REPLACE implies a filling of a place once occupied by something lost, destroyed, or no longer usable or adequate <*replaced* the broken window> ....

The Examiner's interpretation of the of the Tektronix reference appears to follow definition 1, " to restore to a former place or position", that is, PM information in the section overhead of a received frame is allegedly restored or returned to its original place in the frame prior to transmission toward the next node. However, as detailed above, such operation propagates section trace and parity errors from one Section to another, which in inoperative. Thus it is clear that the intended meaning of the word "replaced" in the Tektronix reference follows definitions 2 and 3, in that a new section overhead is generated, and inserted into the frame in place of the section overhead of the received frame.

Thus the Tektronix reference explicitly contradicts the Examiner's assertion that the regenerator reinserts buffered PM information into the section overhead of the outbound frame. Rather, the Tektronix reference explicitly states that the section overhead is replaced. As is noted above (and very well known in the art), such replacement of PM information necessarily involves generation of "new" PM information, which is inserted into the outgoing signal prior to transmission to the next adjacent node.

Thus, the Tektronix reference clearly does not teach or suggest at least the claimed limitation of: "reinserting the buffered PM information into the predetermined location within the signal prior to transmitting the data signal toward the second end-node.", as required by independent claims 1 and 35.

In light of the foregoing, it is submitted that the Examiner has failed to establish *prima facie* obviousness of at least independent claims 1 and 35 in light of Tektronix, Inc. "SONET Telecommunications", 1997.

With reference to claims 5, 7-9, 27, 39 and 41-43 the Examiner's reliance on Path overhead (POH) is insufficient to establish *prima facie* obviousness. As is well known in the art, and described in the Tektronix reference, path overhead "is found in rows 1 to 9 of the first column of the STS-1 SPE (synchronous payload envelope). See page 9, under heading "STS Path Overhead", and FIGs. 3 and 4. Since the SPE floats within the STS frame (page 5, under heading : STS-1 SPE in Interior of STS-1 Frames), it follows that the POH is not "inserted into a predetermined location within a data signal conveyed through the connection" as required by independent claims 1 and 35. Thus POH (or portions thereof) cannot be equated to the PM information of the present invention, as asserted by the Examiner.

With reference to claims 6, 7, 40 and 41 the Examiner's rejection is unsupported by the Tektronix reference. Table 3, sets out the format and use of each field of the section overhead. With respect to section trace (byte J0), table 3 defines that 1 byte (8 bits) is allocated for section trace messaging. There is nothing in this statement which makes the insertion of a nibble of a trace message inherent or inevitable. In that respect, it is well known that a "nibble" is half of a byte (that is, four bits). See, for example, http://www.webopedia.com/TERM/N/nibble.html

With reference to claims 11 and 45, the passage relied upon by the Examiner merely describes the use of the H1 and H2 bytes of line overhead to locate the starting byte of the SPE within the STS frame. Thus:

> "Figure 11 shows an STS-1 pointer (H1 and H2 bytes) which allows the SPE to be separated from the transport overhead. The pointer is simply an offset value that points to the byte where the SPE begins, The diagram depicts the typical case of the SPE overlapping onto two STS-1 frames. If there are any frequency or phase variations between the STS-1 frame and its SPE, the pointer value will be increased or decreased accordingly to maintain synchronization."

Clearly, there is nothing in this paragraph that even remotely relates to the starting and stopping points over which the parity code value may be calculated. Nor can the applicant find any such teaching anywhere else in the Tektronix reference. As such, the Examiner's rejection of claim 11 is unsupported.

With reference to claims 12 and 46, the Examiner's reference to the bit error rate as an indicator field is utterly unfounded. The bit error rate (BER) indicates the "number of coding violations of an incoming signal detected in a unit of time" (or, equivalently, a number of bits). While this is a valid indicator of link performance, there is nothing in the Tektronix reference that teaches or suggests that it constitutes on indicator field, as suggested by the Examiner, or that it is inserted into an indicator field of PM information inserted into an outgoing signal. Furthermore, since the Examiner has previously equated the payload pointer (H1 and H2 bytes) of line overhead as his "indicator field" (see rejection of claim 5), the definition of these bytes provided in table 4 (page 8) shows that insertion of BER data into the Examiner's indicator field would either:

- replace the payload pointer, and thereby render the entire STS transport mechanism inoperative because the start byte of the SPE cannot be located; or

- replace the concatenation indicator, and thereby render the entire STS transport mechanism inoperative because frame concatenation cannot be resolved; or

- replace the STS Path alarm indication signal (AIS-P), and thereby render alarm notification and failure recovery methods inoperative.

Obviously, none of these solutions yields an operative system, and none is supported by the Tektronix reference.

With reference to claims 15 and 33, as discussed above, the Examiner's assertion that the parity value of incoming frames must be extracted for examination and analysis is unsupported conjecture. Furthermore Table 3, page 8 describes the calculation and insertion of BIP-8 parity values into outgoing frames. There is nothing in this passage that teaches or suggests calculation of a parity value for incoming frames, either alone or in combination with a step of extracting the parity code value from the received frame, as is required by claims 15 and 33.

With reference to claim 16, 17, 29 and 48, since the Tektronix reference suggests neither extraction of the parity code from incoming frames nor calculation of the parity of the received frame, it follows that the Tektronix reference does not teach or suggest comparing these values by any means, let alone the method defined in claims 16, 17, 29 and 48.

With reference to claims 18 and 49, it is clearly obvious that the error count (the result of comparing the recalculated and received parity values – see claims 16 and 48) is in no way similar to a bit error rate. As such, the Examiner's reliance on the alleged accumulation of a bit error rate over a unit of time (see page 27) is utterly irrelevant to the subject matter of claims 18 and 49.

With reference to claim 28, the Examiner asserts that this claim is rejected for the same reason as claim 6. However, claim 28 defines that the buffered Trace field is inserted without change. This is entirely different from the subject matter of claim 6. Thus, it is submitted that the Examiner's rejection of claim 28 is in error.

In light of the foregoing, it is submitted that the Examiner has failed to establish *prima facie* obviousness in light of Tektronix, Inc. "SONET Telecommunications", 1997, wherefore reversal of the Examiner's claim rejections is believed to be in order and such action is courteously requested..

9) **Appendix**

Claims involved in the Appeal

1. [Previously Amended] A method of validating a connection mapped between first and second end-nodes via at least one intermediate node in a communications network, the method comprising the steps of:

at the first end-node, inserting performance monitor (PM) information into a predetermined location within a data signal conveyed through the connection;

at the at least one intermediate node:

extracting the PM information from the predetermined location within the signal received at the intermediate node;

buffering the extracted PM information; and

reinserting the buffered PM information into the predetermined location within the signal prior to transmitting the data signal toward the second end-node; and

at the second end-node, extracting the PM information from the data signal.

2. [Original] A method as claimed in claim 1, wherein the data signal contains a SONET/SDH SPE and the step of inserting the PM information comprises a step of inserting the PM information into a predetermined location within a transport overhead (TOH) outside of the SPE.

3. [Original] A method as claimed in claim 2, wherein each node in the network is adapted to support a plurality of connection layers and the connection is mapped on one of the plurality of connection layers.

4. [Original] A method as claimed in claim 3, wherein PM information respecting each layer is inserted into a respective predetermined location of the TOH.

5. [Original] A method as claimed in claim 1, wherein the step of inserting PM information comprises a step of inserting one or more of a Trace field; a Parity field; and an indicator field.

6. [Original] A method as claimed in claim 5, wherein the step of inserting a Trace field comprises inserting a nibble of a trace message for communicating information concerning the connection.

7. [Original] A method as claimed in claim 6, wherein the step of inserting the nibble of a trace message comprises a step of inserting successive nibbles of the trace message into respective successive signals until an entire trace message has been sent.

8. [Original] A method as claimed in claim 6, wherein the step of inserting a Trace field comprises repeating the trace message after the entire trace message has been sent.

9. [Original] A method as claimed in claim 5, wherein the step of inserting a parity field comprises a step of calculating a parity value in respect of a data signal, and inserting the parity value into a next data signal to be transmitted.

10. [Original] A method as claimed in claim 9, wherein the data signal contains a SONET/SDH SPE and the parity value is a BIP-8.

11. [Original] A method as claimed in claim 10, wherein the parity value is calculated starting after an H2 byte of a transport overhead (TOH) portion of the signal, and incorporates all SPE bytes until the H2 byte of a next data signal.

12. [Original] A method as claimed in claim 5, wherein the step of inserting an indicator field comprises a step of accumulating an error count in respect of the data signal.

13. [Original] A method as claimed in claim 12, wherein the data signal is a SONET/SDH signal and the error count is a BIP-8.

14. [Original] A method as claimed in claim 1, wherein the step of extracting the PM information comprises a step of extracting one or more of a trace field; a parity field; and an indicator field.

15. [Original] A method as claimed in claim 14, wherein the step of extracting a parity field further comprises a step of calculating a parity value in respect of the received data signal.

16. [Original] A method as claimed in claim 15, further comprising the steps of:

comparing the recalculated parity value with a received parity value contained in the extracted parity field to obtain an error count; and

XORing the error count with the received parity value.

17. [Original] A method as claimed in claim 16, wherein the step of buffering the PM information comprises the step of buffering the XOR result as a buffered parity value.

18. [Original] A method as claimed in claim 16, further comprising a step of accumulating the error count value in respect of the received data signal.

19. [Original] A method as claimed in claim 14, wherein the step of extracting an indicator field further comprises the steps of:

monitoring the indicator field of each successive received data signal; and

asserting an AIS state if the indicator field of each of a first predetermined number of successive data signals contains a first predetermined value.

20. [Original] A method as claimed in claim 19, further comprising a step of de-asserting the AIS state if the indicator field of each of the first predetermined number of successive data signals contains a value other than the first predetermined value.

21. [Original] A method as claimed in claim 19, wherein the first predetermined number of successive data signals is three.

22. [Original] A method as claimed in claim 19, wherein the first predetermined value is binary "1111".

23. [Original] A method as claimed in claim 14, wherein the step of extracting an indicator field further comprises the steps of:

monitoring the indicator field of each successive received signal; and

asserting an RDI state if the indicator field of each of a second predetermined number of successive signals contains a second predetermined value.

24. [Original] A method as claimed in claim 23, wherein the predetermined number of successive data signals is three.

25. [Original] A method as claimed in claim 23, wherein the second predetermined value is binary "1100".

26. [Original] A method as claimed in claim 1, wherein the step of buffering the extracted PM information comprises double-buffering the extracted PM information.

27. [Original] A method as claimed in claim 1, wherein the step of reinserting the buffered PM information into the predetermined location within the signal overhead comprises a step of inserting one or more of a buffered trace field; a buffered parity field; and a buffered indicator field.

28. [Original] A method as claimed in claim 27, wherein the buffered trace field in inserted into the data signal without change.

29. [Original] A method as claimed in claim 27, wherein the step of inserting the buffered parity field comprises the steps of:

calculating a parity value of an outgoing signal;

XORing the calculated parity value with the contents of the buffered parity field; and

inserting the XOR result into a successive outgoing signal.

30. [Original] A method as claimed in claim 27, wherein the step of inserting the buffered indicator field comprises a step of setting contents of the indicator field to a third predetermined value if an AIS state is has been asserted.

31. [Original] A method as claimed in claim 30, wherein the third predetermined value is binary "1100".

32. [Original] A method as claimed in claim 1, wherein the step of extracting the PM information at the second end-node comprises the step of extracting one or more of a trace field; a parity field; and an indicator field.

33. [Original] A method as claimed in claim 32, wherein the step of extracting the parity field further comprises a step of calculating a parity value in respect of the received data signal.

34. [Original] A method as claimed in claim 32, wherein the step of extracting an indicator field further comprises a step of accumulating an error count value in respect of the received data signal.

35. [Previously Amended] An apparatus for validating a connection mapped between first and second end-nodes via at least one intermediate node in a communications network, the apparatus comprising:

a framer for extracting performance monitoring (PM) information from a data signal being conveyed through the connection;

means for buffering the extracted PM information while the data signal is pointer processed; and

means for inserting the buffered PM information into the data signal prior to forwarding the data signal.

36. [Original] An apparatus as claimed in claim 35, wherein the data signal contains a SONET/SDH SPE and the PM information in inserted into a predetermined location within a transport overhead (TOH) outside the SPE.

37. [Original] An apparatus as claimed in claim 36, wherein each node in the network is adapted to support a plurality of connection layers and the connection is mapped on one of the plurality of connection layers.

38. [Original] An apparatus as claimed in claim 37, wherein PM information respecting each layer is inserted into a respective predetermined location in the TOH.

39. [Original] An apparatus as claimed in claim 35, wherein the PM information comprises one or more of a Trace field; a Parity field; and an indicator field.

40. [Original] An apparatus as claimed in claim 39, wherein the trace field comprises a nibble of a trace message for communicating information concerning the OP-N connection.

41. [Original] An apparatus as claimed in claim 40, wherein successive nibbles of the trace message are inserted into respective successive signals until an entire trace message has been sent.

42. [Original] An apparatus as claimed in claim 40, wherein the trace message is repeated after the entire trace message has been sent.

43. [Original] An apparatus as claimed in claim 39, wherein the parity field contains a parity value calculated in respect of a previously forwarded data signal.

44. [Original] An apparatus as claimed in claim 43, wherein the data signal contains a SONET/SDH frame and the parity value is a BIP-8.

45. [Original] An apparatus as claimed in claim 44, wherein the parity value is calculated starting after an H2 byte of a transport overhead (TOH) portion of the signal, and incorporates all SPE bytes until the H2 byte of a next data signal.

46. [Original] An apparatus as claimed in claim 39, wherein the indicator field comprises an accumulated error count in respect of the data signal.

47. [Original] An apparatus as claimed in claim 46, wherein the data signal comprises a SONET/SDH SPE and the error count is a BIP-8.

48. [Previously Amended] An apparatus as claimed in claim 35, further comprising:

means for calculating a parity value in respect of the received data signal;

means for comparing the calculated parity value with a received parity value extracted from the parity field of the received data signal to generate an error count;

an XOR logic gate adapted to XOR the error count and the received parity value; and

means for saving the XOR result as the buffered parity value.

49. [Original] An apparatus as claimed in claim 48, further comprising a memory for accumulating the error count in respect of the received data signal.

50. [Original] An apparatus as claimed in claim 39, further comprising:

means for monitoring the indicator field of each successive received data signal; and

means for asserting an AIS state if the indicator field of each of a first predetermined number of successive data signals contains a first predetermined value.

51. [Original] An apparatus as claimed in claim 50, further comprising means for de-asserting the AIS state if the indicator field of each of the first predetermined number of successive data signals contains a value other than the first predetermined value.

52. [Original] An apparatus as claimed in claim 50, wherein the first predetermined number of successive data signals is three.

53. [Original] An apparatus as claimed in claim 50, wherein the first predetermined value is binary "1111".

54. [Original] An apparatus as claimed in claim 39, further comprising:

means for monitoring the indicator field of each successive received signal; and

means for asserting an RDI state if the indicator field of each of a second predetermined number of successive signals contains a second predetermined value.

55. [Original] An apparatus as claimed in claim 54, wherein the predetermined number of successive data signals is three.

56. [Original] An apparatus as claimed in claim 54, wherein the second predetermined value is binary "1100".

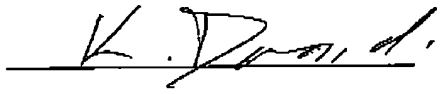
57. [Original] An apparatus as claimed in claim 35, wherein the means for buffering the extracted PM information comprises a double-buffer.

58. [Original] An apparatus as claimed in claim 39, wherein the means for inserting the PM information comprises means for setting contents of the indicator field to a third predetermined value if an AIS state is has been asserted.

59. [Original] An apparatus as claimed in claim 58, wherein the third predetermined value is binary "1100".

If any extension of time under 37 C.F.R. § 1,136 is required to obtain entry of this brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,



By: Kent Daniels
Reg. No. 44,206
Attorney for the Applicants

August 12, 2005

Ogilvy Renault LLP
Suite 1600
1981 McGill College Avenue
Montreal, Quebec
Canada, H3A 2Y3
Tel: (613) 780 8673

USPTO 8/12/2005 3:35 PM PAGE 1/001 Fax Server
Auto-reply fax to 613 230 6706 COMPANY:

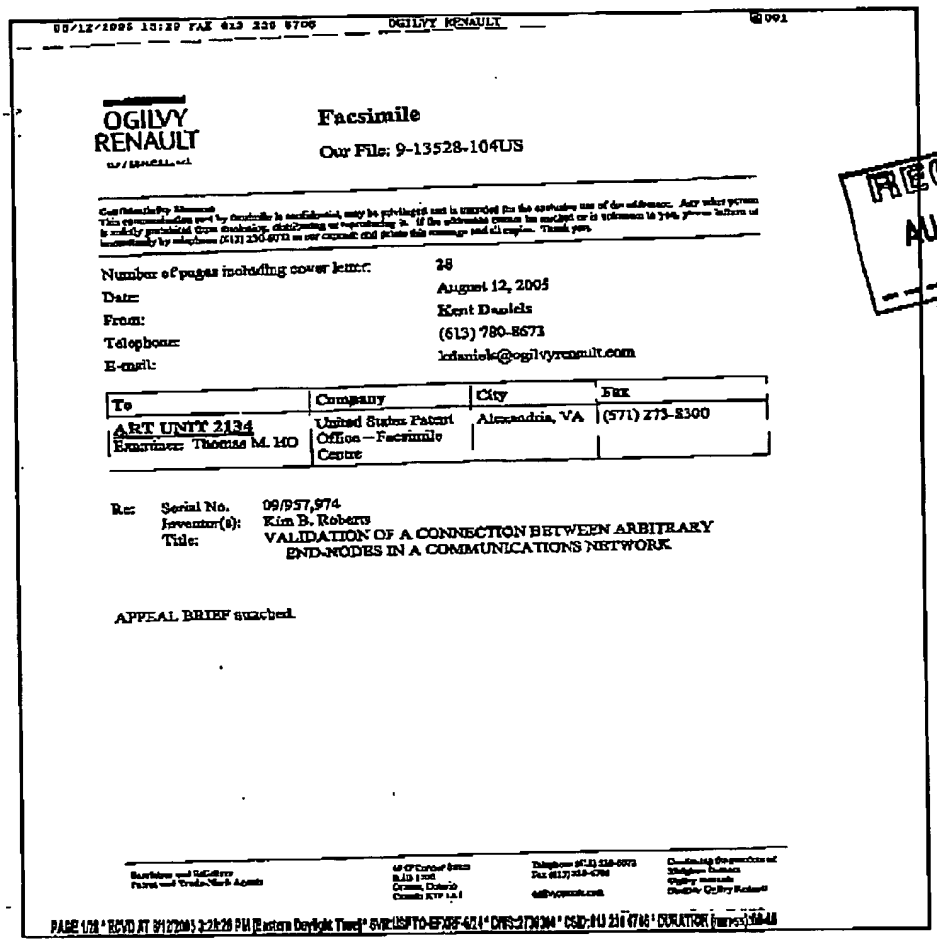
Auto-Reply Facsimile Transmission

TO: Fax Sender at 613 230 6706

Fax Information
Date Received: 8/12/2005 3:28:26 PM [Eastern Daylight Time]
Total Pages: 28 (including cover page)

ADVISORY: This is an automatically generated return receipt confirmation of the facsimile transmission received by the Office. Please check to make sure that the number of pages listed as received in Total Pages above matches what was intended to be sent. Applicants are advised to retain this receipt in the unlikely event that proof of this facsimile transmission is necessary. Applicants are also advised to use the certificate of facsimile transmission procedures set forth in 37 CFR 1.8(a) and (b), 37 CFR 1.6(f). Trademark Applicants, also see the Trademark Manual of Examining Procedure (TMEP) section 306 et seq.

Received Cover Page ========>



08/12/2005 15:20 FAX 613 230 6706 OGILVY RENAULT 001

OGILVY RENAULT

Facsimile

Our File: 9-13528-104US

RECEIVED
AUG 12 2005

Number of pages including cover letter:	28
Date:	August 12, 2005
From:	Kent Daniels
Telephone:	(613) 780-8573
E-mail:	kdaniels@ogilvyrenault.com

To	Company	City	Fax
ART UNIT 2134 Examiner: Thomas M. HO	United States Patent Office – Facsimile Centre	Alexandria, VA	(571) 273-8300

Re: Serial No. 09/957,974
Inventor(s): Kim B. Roberts
Title: VALIDATION OF A CONNECTION BETWEEN ARBITRARY END-NODES IN A COMMUNICATIONS NETWORK

APPEAL BRIEF attached.

PAGE 1/28 * RCVD AT 8/12/2005 3:28:26 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/6 * DNIS:2738300 * CSID:613 230 6706 * DURATION (mm-ss):08-12

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2415
CONNECTION TEL	15712738300
SUBADDRESS	
CONNECTION ID	
ST. TIME	08/12 15:29
USAGE T	06'46
PGS. SENT	28
RESULT	OK

OGILVY RENAULT
LLP/S.E.N.C.R.L., s.r.l.

Facsimile

Our File: 9-13528-104US

Number of pages including cover letter:	**28**
Date:	August 12, 2005
From:	**Kent Daniels**
Telephone:	(613) 780-8673
E-mail:	kdaniels@ogilvyrenault.com

To	Company	City	Fax
ART UNIT 2134 Examiner: Thomas M. HO	United States Patent Office – Facsimile Centre	Alexandria, VA	(571) 273-8300

Re: Serial No. 09/957,974
Inventor(s): Kim B. Roberts
Title: VALIDATION OF A CONNECTION BETWEEN ARBITRARY END-NODES IN A COMMUNICATIONS NETWORK

APPEAL BRIEF attached.

Deposit Account Statement

Requested Statement Month: Aug-05
Deposit Account Number: 195113
Name: OGILVY RENAULT
Attention: DEBBIE SEARLE
Address: 1981 MCGILL COLLEGE AVENUE
City: MONTREAL,
State: CANADA
Zip:
Country: H3A 2Y3 CANADA

DATE	AGENT	POSTING REF TXT	ATTORNEY DOCKET NBR	FEE CODE	AMT	CAN
Aug-15	16603 KD	9597974	9-13528-104US	1402	$500.00	$650.00
Aug-15	16607 JR	10202609	15228-12US	1501	$1,400.00	$1,820.00
Aug-15	16607 JR	10202609	15228-12US	1504	$300.00	$390.00
Aug-15	16607 JR	10452507	1775-97US	1501	-$1,330.00	-$1,729.00
Aug-15	16607 JR	10452507	1775-97US	1501	$1,400.00	$1,820.00
Aug-15	16942 PS	11116292	16066-22US	1806	$180.00	$234.00
Aug-15	16596 MW	11037365	16319-245US-1	1501	$1,400.00	$1,820.00
Aug-15	16596 MW	11037365	16319-245US-1	1504	$300.00	$390.00
Aug-15	16596 MW	11037365	16319-245US-1	8001	$6.00	$7.80
Aug-15	17165 JC	10137648	16350-26US	8021	$40.00	$52.00
Aug-15	19560 MF	6347785	15933-7US-2	1551	$900.00	$1,170.00
Aug-16	?	10778482	?	2201	$500.00	$650.00
Aug-16	?	10778482	?	2814	$65.00	$84.50
					$5,661.00	$7,359.30

Need Help? | USPTO Home Page | Finance Online Shopping Page